

M I N I S T R Y O F T H E E N V I R O N M E N T

OVERVIEW GUIDE

Municipal Drinking Water Licensing Program

FOR

**MUNICIPAL RESIDENTIAL
DRINKING WATER SYSTEMS**

October 2007

Version 1.1

Protecting our environment.



Ontario

Foreword

Transition to Licensing

With the proclamation of section 33 of the *Safe Drinking Water Act, 2002 (SDWA)* in May of 2007, the Ministry of the Environment began a transition from an approvals process referred to as the Certificate of Approval (C of A) Program for municipal drinking water systems to the new Municipal Drinking Water Licensing Program (the Licensing Program). This transition will occur over a period of approximately 5 years starting in late 2007.

This Overview Guide is intended to provide owners and operating authorities of municipal residential drinking water systems with a summary of the approvals processes that are applicable during this transition and to describe fundamental concepts associated with these processes.

The requirement to obtain a licence and a drinking water works permit (DWWP) applies to owners of municipal residential drinking water systems. These include large and small municipal residential drinking water systems as defined in O. Reg. 170/03. Owners of these systems must submit to the Director an application for a licence, an application for a DWWP and completed operational plans on or before the dates prescribed by **O. Reg. 188/07 – Licensing of Municipal Drinking-Water Systems**.

Once a licence has been issued for a drinking water system, authority for further alterations to the system will occur through the processes and procedures associated with the Licensing Program. Until a licence is issued for a system, approvals for any alterations to the system will occur through the existing C of A process.

Further information respecting applications for Cs of A can be found in the ministry's publication **Guide on Applying for Approvals Related to Municipal and Non-Municipal Drinking-Water Systems – Revised November 2003**.

This overview guide discusses the three submissions which must be made to the Director¹ at the Ministry of the Environment pursuant to O. Reg. 188/07, specifically:

1. an application for a DWWP,
2. an application for a licence, and

¹ This means the Director for purposes of sections 16(2), 32(1)(b), and 33 of the SDWA

3. the submission of Operational Plans

This document also references other submissions and/or processes linked to the issuance or renewal of a licence, including:

1. the accreditation of the operating authorities,
2. the preparation and approval of a financial plan, and
3. the issuance of a Permit to Take Water (PTTW), if applicable.

These latter items are not part of the requirements for submissions to the Director pursuant to O. Reg. 188/07 but are related to other requirements which must be fulfilled, as part of the licensing process.

Throughout this overview guide reference is made to additional publications and references which are summarized at the end of this guide and will be available from the Ministry of the Environment.

Acronyms and Terms:

C of A – Certificate of Approval
DWWP – Drinking Water Works Permit
Licence – Municipal Drinking Water Licence
PTTW – Permit to Take Water
SDWA – *Safe Drinking Water Act, 2002*

Note:

This overview guide is only a summary. To be clear about your specific legal requirements, you should refer to the *Safe Drinking Water Act, 2002*, and the regulations and other instruments made under the Act. For more information, please access the Drinking Water Ontario portal at www.ontario.ca/drinkingwater or contact the Licensing Program Information Centre at 1-877-955-5455 (Toronto Area 416-314-1651).

Some of the publications referenced in this guide are under development and will be made available as soon as they are finalized.

If you wish to proceed with applications for a licence or a Drinking Water Works Permit in advance of your prescribed date please contact:

**Indra Prashad
Manager,
Approvals and Licensing
Safe Drinking Water Branch
Drinking Water Management Division
Ministry of the Environment
(416) 314-6437**

Certificate of Approval vs. Licence and Drinking Water Works Permit

Authorities to Establish, Alter, Use or Operate

Under the current C of A Program, an approval (C of A) is required prior to the establishment or alteration of a municipal residential drinking water system. The C of A also serves as the legal authority to use or operate the system. Conditions placed on the C of A may relate to either the physical works or the operation of the system.

Under the Licensing Program, the authority to establish and alter will be provided by a DWWP and the authority to operate will be provided separately through the municipal drinking water licence.

Both of these instruments will contain Terms and Conditions similar to the existing C of A. Conditions which may be placed on the DWWP will generally relate to the physical works, while conditions on the licence will generally be related to operational matters.

The licence to operate the system will have an expiry date which will be no later than the fifth anniversary of the day of issue or licence renewal and will also contain a date which is the deadline for an application for renewal of the licence. The application date will not be less than 90 before the expiry of the licence. The DWWP will generally not have an expiry date unless such a requirement is considered appropriate by the Director.

One Licence and One Permit per System

A drinking water system is made up of all connected water works with a common owner. The DWWP will be a description of the system, an authorization for alterations to the system and will contain conditions relating to the physical works.

Since 2002, Cs of A for the treatment component of a drinking water system have been consolidated into a single legal instrument. While for all other components of a drinking water system, such as storage facilities, pumping stations and distribution system components

including water mains, individual Cs of A continue to be issued.

However, under the Licensing Program, a single DWWP and a single licence will be issued for the entire drinking water system.

The DWWP will provide a description of the overall system, including treatment, storage, pumping and distribution and will include, when applied for, an authority to alter the system in a specified way, much in the same way that a C of A currently approves alterations. Once the first DWWP has been issued for the system, further alterations to the system will need to be authorized through specific amendments to the DWWP.

Revoking Cs of A

Once issued, a condition on the licence will revoke all Cs of A which were previously issued for the drinking water system.

Municipal Residential Drinking Water Systems	Current Process	Licensing Program	
	Certificate of Approval (C of A)	Municipal Drinking Water Licence	Drinking Water Works Permit (DWWP)
Authority to establish or alter	✓		✓
Authority to use or operate	✓	✓	
Expiry Date	Generally No	Yes (Within 5 years)	Generally No
Number of Legal Instruments per System	Multiple	One	One

The Licence

Applying for the First Licence

The requirement to apply for the first licence is contained in section 33 of the SDWA, which states that an application for the licence must be submitted to the MOE Director on or before the date prescribed by regulation.

O. Reg. 188/07 – Licensing of Municipal Drinking-Water Systems² provides a submission date in schedules to the regulation for each drinking water system owner.

The dates are phased over an 18 month period as follows:

Large Municipalities:

- over 100,000 total service population
- Schedules 1 & 2 of the regulation
- January 1, 2009 and February 1, 2009

Medium Municipalities:

- between 1,001 to 100,000 total service population
- Schedules 3 to 14 of the regulation
- March 1, 2009 and the first of every month thereafter to February 1, 2010

Small Municipalities:

- 1,000 or less total service population
- Schedules 15 to 18 of the regulation
- March 1, 2010 and the first of every month thereafter to June 1, 2010

The applicant should refer to the ministry's **Guide for Applying for a Municipal Drinking Water Licence (under development)**. An application form will be provided and will indicate what information is required to be provided to the Director.

The information which is to be provided to the Director will need to include:

1. A copy of all current operational plans relating to the system, as of the date of application, prepared in accordance with the Director's Directions for Operational Plans.

There may be one or more operational plans prepared for a drinking water system depending on the number of

² The dates prescribed in O. Reg. 188/07 for the submission of an application for a licence also represent the dates on or before which an application for a DWWP and an operational plan must be submitted to the Director.

operating authorities with responsibilities for the system.

The Director's directions are formally entitled '**Director's Directions – Minimum Requirements for Operational Plans – Municipal Drinking Water Systems – July 2007**

The applicant should also refer to the ministry publication – **Guide for Submitting Operational Plans for Director's Acceptance (under development)**.

2. Proof satisfactory to the Director that financial plans for the system satisfy the requirements under the SDWA.

Requirements for financial plans have been prescribed by the Minister through **O. Reg. 453/07 – Financial Plans**.

For an existing municipal drinking water system, a financial plan will not be required at the time of application for the first licence (i.e. respecting an application for the first licence in accordance with O. Reg. 188/07). The first licence issued will, however, contain a condition where the Director will require that the owner of the drinking water system, by the later of July 1, 2010 and the date that is six months after the date the first licence is issued, prepare and approve financial plans for the system that satisfy the requirements of section 3. of the financial plans regulation.

For a new 'greenfield' drinking water system, financial plans will have to be prepared and approved by a resolution of council (or of the governing body of the owner if the owner has a governing body and is not a municipality) before making the application for the first licence. In this case, the requirements for the financial plans are prescribed in section 2. of O. Reg. 453/07.

The Ministry of the Environment has produced a guidance document for the preparation of financial plans entitled **Toward Financially Sustainable Drinking-Water Systems and Wastewater Systems – August 2007**. The regulation should also be referenced to confirm the requirements for financial plans.

3. Proof satisfactory to the Director that an accredited operating authority will be in charge of the system.

An accredited operating authority must be in charge of a system after the date prescribed by O. Reg. 188/07.

It is recognized that the accreditation of the operating authority, or operating authorities, may not have been finalized at the time of an application for a licence. However, accreditation of the operating authority (ies) must be in place before the Director will issue the licence for the system.

It is the responsibility of the owner of the system to have an accredited operating authority (ies) in charge of the system, however, it is the responsibility of the operating authority (ies) to make application to the accreditation body for accreditation in respect of the system, or portion of the system that it operates.

4. Proof satisfactory to the Director that a Permit To Take Water has been or will be issued under section 34 of the *Ontario Water Resources Act* (where applicable).

The numbers of the permits to take water (PTTWs) that have been issued and are current for the drinking water system will need to be submitted as part of the application for a licence. The applicant will need to identify any applications for issuance or renewal of a PTTW that have been made but for which permits have not yet been issued. A statement will need to be made that PTTWs have been applied for, or have been issued for all sources of raw water supply for which a PTTW is required. A PTTW is not required for a drinking water system that receives all of its drinking water from another drinking water system.

Further information respecting PTTWs can be obtained from the ministry's **Permit To Take Water Manual – April 2005**.

The PTTW Program will continue in its present form and will not be altered as a result of the implementation of the Licensing Program.

5. Other information to be provided in the application to enable the Director to

determine that the drinking water system will be operated in accordance with the requirements under the SDWA and the conditions of the licence further to clause (f) of subsection 44(1) of the Act.

In this context, the ministry will be asking for a raw water characterization as part of an application for the issuance or renewal of a licence. This information will be used to confirm the suitability of the treatment systems in place.

Licence Fees

At this time, fees will not be required to be submitted respecting an application for a first licence, a licence amendment or a licence renewal.

Issuing the First Licence

Once the application for a licence has been processed and reviewed by the Director, a decision will be made on the issuance of the first licence.

The Director will not issue a licence until the Director has determined that the following have occurred:

1. A drinking water works permit (DWWP) or permits has/have been issued for the system.

O.Reg 188/07 specifies the date on or before which an application for a DWWP must be submitted to the Director. For all owners of existing municipal drinking water systems this date will be the same date as the date for the submission of an application for a licence.

The applicant should refer to sections in this guide respecting the DWWP as well as the ministry's **'Guide for Applying for a Drinking Water Works Permit (under development)**.

2. Operational plans have been submitted that meet the requirements of the Director's Direction.

Operational plans submitted for licence purposes must be the same plans used by the accreditation body for purposes of accrediting the system's operating authority. It is recognized that operational plans submitted by the owner to the Director as part of an application for a licence may also be part of an application by the operating

authority to the accreditation body for accreditation. It is further recognized that these plans may be modified as a result of a review by the Director or a review by the accreditation body. The ministry will ensure, through close dialogue with the accreditation body, that the version of the operational plan that is accepted by the Director is also the operational plan that is the basis for accreditation.

3. Accreditation has been obtained by the operating authority, or operating authorities, who will be in charge of the system.

The Director will receive notification from the accreditation body that accreditation has been issued to the operating authority, or operating authorities for the system.

4. The requirements respecting financial plans have been met by the owner.

As noted previously, in the case of an existing municipal drinking water system submitting an application for the first licence in accordance with O. Reg. 188/07, a financial plan will not be required to have been prepared and approved at the time of application.

Owners of proposed new 'greenfield' drinking water systems will have to prepare and approve financial plans before making an application for a licence.

In the case of an application for a licence for a new 'greenfield' drinking water system or an application for a licence renewal, the Director will require a copy of a resolution of council (or the governing body) affirming that the financial plans meet the requirements of O. Reg. 453/07.

5. PTTWs exist for the system.

The Director will review the information provided in the application for a licence as well as confirm through internal processes that the required PTTWs exist for the applicable drinking water system.

6. Satisfaction that the system will be operated in accordance with the SDWA and the conditions of the licence.

The information considered for making this decision will come from many

sources including information being provided as part of the application for a licence. Information will also be obtained from the ministry's drinking water information systems and the ministry's drinking water inspection staff.

Licence Content and Conditions

Information in the Licence

The SDWA requires that a licence identify the following:

1. All owners of the system;
2. The accredited operating authority (or operating authorities) for the system;
3. The date of issue and number of the Drinking Water Works Permit for the system;
4. The number of the most recent financial plans for the system, if financial plans are required for the system;
5. The number of each operational plan for the system; and
6. The date of issue and number of each permit to take water, if one or more permits are required for the system.

Licence Expiry and Renewal Application Dates

The SDWA requires that the expiry date for a licence issued or renewed shall be no later than the fifth anniversary of the day of issue or renewal and shall be set out in the licence. The Act also requires that a licence or renewal contain a date that is the deadline for an application for renewal of the licence.

Licence Conditions

The Director will place terms and conditions in the licence. These terms and conditions will, in many cases, be similar to the terms and conditions placed in existing Cs of A with respect to the operation of the drinking water system and will relate to matters such as: operations manuals, chemical standards, rated capacity, management of residue, monitoring and recording.

Licence Conditions May be Appealed

As is the case with a C of A, the owner may request the Environmental Review Tribunal to review one or more conditions imposed on a licence. Such a request must be made within 15 days of the service (receipt) of the licence.

For more information on appeals, refer to Part X of the SDWA and the Environmental Review Tribunal website at www.ert.gov.on.ca.

Licence Amendments

The recipient of a licence may request amendments to the licence through an application for amendment.

The Director has the authority to amend a licence without an application being received. This may occur where an applicant has applied for an amendment to a DWWP to authorize the alteration of a drinking water system and the Director adds conditions to the licence with respect to operational matters, such as additional monitoring or reporting. Other circumstances may warrant a Director initiated amendment as well.

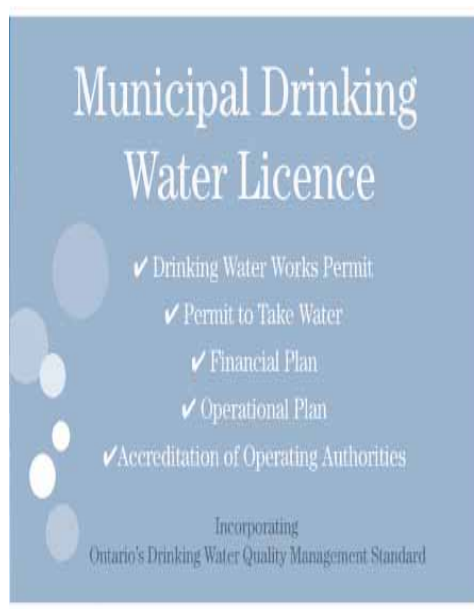
Applying for a Licence Renewal

The information which must be submitted for a licence renewal is essentially the same as the information required for the issuance of the first licence (see 'Applying for the First Licence') except that updated Financial Plans will be required to be prepared and approved prior to submitting a licence renewal application.

Issuing a Licence Renewal

The licence must be renewed within a five year period. An application for renewal will need to be submitted and the Director will issue a licence renewal if the Director is satisfied that:

1. the system will continue to be operated by an accredited operating authority or operating authorities;
2. the drinking water works permit remains in force;
3. operational plans for the system satisfy the requirements of the Director's Direction;
4. financial plans satisfy the requirements of the SDWA;
5. the system has been and will continue to be operated in accordance with the requirements under the SDWA and the licence; and
6. any required permits to take water remain in force.



Drinking Water Works Permit (DWWP)

Functions of the DWWP

The DWWP will provide a general description of the entire drinking water system including all treatment systems, pumping, storage facilities and the distribution system.

The DWWP will also authorize any specific alterations (including extensions) to the system which have been applied for by the owner.

Applying for the first DWWP

As is the case with the licence, the requirement to obtain the first DWWP for existing municipal drinking water systems is provided in section 33. of the SDWA which states that an application for the DWWP must be submitted to the MOE Director on or before the date prescribed by regulation. **O. Reg. 188/07 – Licensing of Municipal Drinking-Water Systems** prescribes these dates, which are the same dates as the dates for the submission of the application for a licence and the submission of operational plans (see 'Applying for the First Licence').

Further information respecting the application for a DWWP or an amendment to a DWWP can be obtained from the ministry's publication **Guide for Applying for a Drinking Water Works Permit (under development)**.

Information Required with the Application

The primary purpose of the first DWWP will be to clearly describe the drinking water system at the time of application and to provide a framework to authorize future alterations through amendments to the DWWP.

The first application should be completed to permit the drinking water system to be described in the DWWP as a system with the following physical subsystems:

1. Treatment

Treatment components include any parts of the system or unit processes that provide a treatment function including intakes, pre-screening, coagulation, flocculation, filtration, disinfection and the addition of chemicals. Typically this would include those facilities constituting 'treatment plant(s)' but may also include such items as re-chlorination

facilities at remote locations within the drinking water system.

The DWWP will be issued for the entire drinking water system, and as such, will need to describe all treatment facilities associated with the system. This may include multiple treatment plants within one system in some cases.

It is anticipated that the description of treatment components used in the consolidated Cs of A (issued subsequent to the submission of the Engineers' Reports required by O. Reg. 459/00) will provide information for the preparation of this part of the DWWP. These Cs of A have been amended over time as the works have been altered, but still represent a consolidated description of the current treatment components.

The format of the description will change to a tabular approach which will make the description more concise and easier to read and interpret.

2. Distribution - Watermains

The second physical subsystem will describe the watermains within the distribution system.

Current Cs of A for distribution components of a system provide a narrative description of the works; however it is proposed that the DWWP will describe the works graphically.

A requirement for applications for a DWWP will be that descriptions of the watermain components of a distribution system be submitted using a graphical format (i.e. a map showing watermains and their approximate location within road allowances). This map would contain critical information such as a linear representation of the watermain, pipe diameter, street name, valving and hydrant locations.

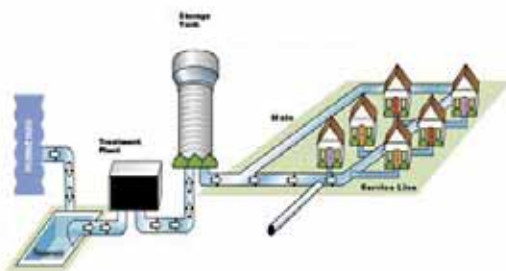
It is proposed that this submission be made in Adobe Acrobat (.pdf) format where possible.

It is also proposed that through a condition of the DWWP, the owner will be required to keep this graphical description current within 30 days of having altered or extended any watermains. Periodically, the ministry will request that the graphical description be submitted to the MOE

for an updating of the DWWP description.

3. Other

This third physical subsystem description, entitled 'other', will capture those components within the drinking water system which are not described as either treatment or as part of the watermain system. This will typically include components such as booster pumping stations that are not within the treatment facility and storage facilities, and that are not used for treatment purposes. Owners will be requested to provide, in their application, a description of the 'other' components of the system in a similar tabular fashion to that used for the description of treatment works.



DWWP Fees

There will not be a fee associated with the application for the DWWP made pursuant to section 33 of the SDWA (i.e. an application for the first DWWP respecting systems with dates prescribed by O. Reg. 188/07).

Applications for subsequent amendments to a DWWP, including amendments to authorize changes to the drinking water system, will require the payment of a fee.

The fees schedule for DWWPs will be set out in a **Minister's Order for Drinking-Water Approval Fees** (*yet to be made*) and is anticipated to be similar to the fee schedule for Approvals (Cs of A) for a similar type of application currently contained in the **Minister's Order for Drinking-Water Approval Fees – May 30, 2003**.

First DWWP - Engineering Review

The ministry is not contemplating a detailed engineering review of each component of the drinking water system as part of the issuance of the first DWWP. In most cases, the design of these works would have been previously reviewed during the course of issuing a C of A. In addition, the treatment components of drinking water systems would have been re-reviewed as

part of the Engineers' Report requirements of O. Reg. 459/00 and the subsequent issuance of consolidated Cs of A for treatment works.

The ministry will, however, be asking for a raw water characterization as part of an application for the issuance or renewal of a licence. This information will be used to confirm the ongoing suitability of the treatment systems in place.

If an application for a drinking water system alteration is made at the same time as an application for the first DWWP, an engineering review will be conducted for new components in the same manner as would have been the case for an application for a C of A.

Issuing the First DWWP

The drafting of the first DWWP will be a joint effort involving the applicant and ministry staff. The owner of the drinking water system will receive a draft DWWP for review and comment to ensure that the information in the DWWP is correct.

DWWP Expiry

The DWWP will generally not have an expiry date associated with the permit.

In some specific circumstances, however, the Director may choose to time-limit the authority to make alterations to the drinking water system and, in such cases, may impose an expiry date for the authorization as a condition of the permit. The Director may also require that modifications be completed within a specific time period in appropriate circumstances.

DWWP Conditions

The Director may place several terms and conditions on the DWWP. These will, for the most part, relate to the physical works as opposed to operational matters. The conditions may relate to such matters as deadlines for undertaking an alteration or may provide authority to further alter the works.

DWWP Conditions May Be Appealed

As is the case with a C of A and the Licence, the owner may request the Environmental Review Tribunal to review one or more conditions imposed on a DWWP. Such a request must be made within 15 days of the service (receipt) of the DWWP.

For more information on appeals, refer to Part X of the SDWA and the Environmental Review Tribunal website at www.ert.gov.on.ca.

DWWP Amendments

The mechanism to be used to authorize an alteration (including an extension) to a drinking water system will be an amendment to the DWWP. An application for this amendment will replace the current process of obtaining a C of A, or a C of A amendment, to permit changes to the system.

As is the case with Cs of A, the requirements of the *Environmental Assessment Act* must be complied with before a DWWP can be issued authorizing the alteration. Further information in this regard will be provided in the detailed guides.

As previously mentioned, the SDWA also gives the Director authority to make amendments to the DWWP at the Director's discretion.

Role of the Transfer of Review Program

The Transfer of Review Program, where it exists, will continue for the purposes of processing applications for DWWP amendments to permit specified components, typically watermains and other non-complex works, to proceed.

This process will result in the issuance of a Notice of Amendment to the DWWP authorizing the alteration to the drinking water system.

Transfer of Review Program

The Transfer of Review Program is a program whereby a designated municipal authority reviews an application for an approval and supporting documentation on behalf of the ministry. Subsequent to a review of the application, the municipal authority submits the application to the Ministry, together with a recommendation for approval, or provides comments explaining why an application is not recommended for approval.

The types of drinking water works covered by this program depend on individual agreements between the Ministry and the designated municipality. However, they typically involve undertakings that are considered to be non-complex, predictable in their performance, and are associated with well developed design criteria. In the case of drinking water systems, these works include watermains and some pumping stations.

At the present time, 26 municipalities are participating in the program. These municipalities collect and retain the fees for application review that would otherwise be submitted to the ministry. The legal authority for these municipalities to collect and retain the fees is provided in the 'Minister's Order for Drinking-Water Approval Fees' dated May 30, 2003.

Further details of the program are contained within the ministry publications '**Guide for Applying for a Drinking Water Works Permit**' (for DWWPs) and '**Guide on Applying for Approvals Related to Municipal and Non-Municipal Drinking-Water Systems – Revised November 2003**' (for Cs of A).

Quality Management System (QMS)

What is a Quality Management System?

A quality management system (QMS) is a system to: a) establish policy and objectives and achieve those objectives; and b) direct and control an organization with regard to quality.

Quality management systems and management system standards are not new. They have been around since the early 1950s. In 1987 the International Organization for Standardization (ISO) released the first version of the ISO 9001 Quality Management System Standard. Since that time, organizations all over the world have been implementing the requirements of management system standards.

Most management system standards are generic. They can be applied to any type or size of organization. They have been developed for the implementation of quality-based or environmentally-based management systems in any type of organization.

Management system standards have also been developed for specific industries or product sectors. For example, the Hazard Analysis and Critical Control Point (HACCP) standard is an internationally recognized, science-based, food safety standard that was developed to help ensure the manufacture of safe food products.

Quality management for Ontario's municipal drinking water systems will occur through the development and implementation of a QMS for each drinking water system based on Ontario's Drinking Water Quality Management Standard (DWQMS).

The complexity of a QMS for a drinking water system will depend to some degree on the size of the drinking water system and its processes. For a small drinking water system (e.g. consisting of a well with chlorination, the QMS can be relatively simple. For a system with a large number of staff, several connected surface water treatment plants, a complex distribution system, and interconnections to other systems, the QMS will be larger and more comprehensive.

Drinking Water Quality Management Standard (DWQMS)

What is the Drinking Water Quality Management Standard?

The DWQMS is a 'Made-in-Ontario' management system standard developed specifically by the drinking water sector for municipal residential drinking water systems. Its requirements are similar to ISO-based quality management standards but not equivalent.

The DWQMS sets out a framework for the operating authority and the owner of a drinking water system to develop a QMS that is relevant and appropriate for a specific system.

The DWQMS contains elements of both the ISO 9001 standard with respect to management systems and the HACCP standard with respect to product safety. The DWQMS also incorporates the HACCP approach to risk assessment and reflects the multi-barrier approach for drinking water safety.

In general, the concepts outlined in the DWQMS reflect, for the most part, how owners and operating authorities currently manage and operate their drinking water systems. The DWQMS however, requires that these concepts be formalized and documented in an operational plan, and that there is a documented commitment throughout an organization to continuously review and improve quality management practices.

The DWQMS approach emphasizes the importance of:

- Proactive and preventative rather than strictly reactive management strategies to identify and manage risks to public health;
- The establishment and documentation of management procedures;
- Meeting the management procedures; and
- Continuous improvement of the management system.

The definition of QMS in the DWQMS refers to the establishment of policies and objectives. The DWQMS has explicit requirements for policies but does not make specific reference to objectives. Objectives are, however, embedded or implicit in most of the DWQMS elements.

Structure of the DWQMS

The DWQMS is based on a PLAN, DO, CHECK and IMPROVE methodology which is similar to that found in some international standards. PLAN requirements of the standard typically specify policies and procedures that must be documented in the operational plans for the drinking water system, while DO requirements specify that the policies and procedures must be implemented. CHECK and IMPROVE requirements of the standard are reflected in the requirements to conduct internal audits and management reviews.

The 21 elements of the DWQMS are as follows:

DWQMS Elements	
Element 1 -	Quality Management System
Element 2 -	Quality Management System Policy
Element 3 -	Commitment and Endorsement
Element 4 -	Quality Management System Representative
Element 5 -	Document and Records Control
Element 6 -	Drinking-Water System
Element 7 -	Risk Assessment
Element 8 -	Risk Assessment Outcomes
Element 9 -	Organizational Structure, Roles, Responsibilities and Authorities
Element 10 -	Competencies
Element 11 -	Personnel Coverage
Element 12 -	Communications
Element 13 -	Essential Supplies and Services
Element 14 -	Review and Provision of Infrastructure
Element 15 -	Infrastructure Maintenance, Rehabilitation and Renewal
Element 16 -	Sampling, Testing and Monitoring
Element 17 -	Measurement and Recording Equipment Calibration and Maintenance
Element 18 -	Emergency Management
Element 19 -	Internal Audits
Element 20 -	Management Review
Element 21 -	Continual Improvement

Guidance Document on Quality Management and the DWQMS

The Ministry of the Environment has prepared a comprehensive guidance document entitled **Implementing Quality Management: A Guide For Ontario's Drinking Water Systems – July 2007**.

The guidance document has been developed to assist owners and operating authorities in developing, implementing, and maintaining a quality management system for their drinking water systems. The format, content and supporting material contained within the guide have specifically been developed to assist owners and operating authorities who have no previous background in concepts of quality management. The intent is that staff currently engaged by the owner/operating authority will be able, with the assistance of the guide, to develop and implement a quality management system that will meet the requirements of the DWQMS.

The guide has been designed for small and large drinking water systems alike that provide treatment, transmission and/or distribution services. It has been designed to be used by a variety of people including:

- QMS representatives;
- QMS team members;
- Management of the operating authority;
- Operating authority staff; and
- System owners.

The guidance document contains tips, ideas and suggestions that can help owners and operators with the implementation of a QMS and is divided into three parts

- Part I is the interpretative and implementation guide for the DWQMS;
- Part II contains sample templates for various procedures; and
- Part III contains four model operational plans for various drinking water systems.

DWQMS Pocket Guide

The ministry has also prepared an abbreviated outline of the DWQMS entitled **Ontario's Drinking Water Quality Management Standard – Pocket Guide – July 2007**.

The purpose of the pocket guide is to:

- provide a brief summary of the Licensing Program;
- Provide relevant terms and definitions; and
- List all of the elements of the DWQMS and provide a plain language summary of what they mean.

Operational Plans

What are Operational Plans?

Operational plans document the Quality Management System (QMS) for a 'subject system'.

A 'subject system' is a municipal residential drinking water system, or portion of a system, which is operated by a single operating authority. In the case of a single system with multiple operating authorities, there will be multiple subject systems and multiple operational plans.

Who Prepares Operational Plans?

It is anticipated that operational plans will typically be prepared on behalf of owners by the operating authority of the subject system in consultation with the owner of the system, if the owner is different than the operating authority.

Who Owns Operational Plans?

Regardless of who prepares the operational plan, the owner of the system will retain ownership of the operational plans once they have been prepared and must endorse their content.

If an operating authority is responsible for multiple subject systems, the operating authority may choose to develop common QMS procedures for elements that are common for all of the subject systems.

Submission of Operational Plans: Who & When

Operational plans must be submitted:

- a. by the owner of a drinking water system to the Director on or before the date prescribed for the owner in **O. Reg. 188/07 – Licensing of Municipal Drinking-Water Systems** for the purpose of Director acceptance.
- b. by the operating authority to the accreditation body for the purposes of accreditation.

Content of Operational Plans

Operational Plans shall contain the information necessary to meet the applicable 'PLAN' requirements of the **Drinking Water Quality Management Standard (DWQMS)** for the category of accreditation being sought.

Operational plans being submitted to the Director for acceptance must also meet the requirements of the **Director's Directions, Minimum Requirements for Operational Plans – July 2007**.

Further information respecting the submission of operational plans to the Director can be obtained from the ministry's publication **Guide for Submitting Operational Plans for Director's Acceptance (under development)**.

Director Acceptance of Operational Plans

The ministry's Director will review the operational plans and will issue a notice accepting the operational plans if the Director is satisfied that the plans meet the requirements of the Director's Direction. In the event that the Director rejects the operational plans, a notice will provide reasons for the rejection.

Public Disclosure of Operational Plans

The Director's Direction contains requirements respecting the public disclosure of Operational Plans. In summary, the owner of the system must make Operational Plans available for viewing at specified locations accessible to the public. The owner shall not make public any part of the Operational Plan where the disclosure:

1. could reasonably be expected to seriously threaten the safety or health of an individual;
2. could prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons, or organization; or
3. contains trade secrets or financial, commercial, scientific or technical information that belongs to the owner or operating authority and has monetary value or potential monetary value.

Operational Plans and Licence Renewals

In addition to the other prerequisites for issuing a licence renewal, the Director will need to establish that the operational plans for the drinking water system continue to satisfy the requirements of the Director's Directions.

In the case of a licence renewal, the operational plans would need to meet all of the 'PLAN' requirements of the entire DWQMS.

Accreditation

What is Accreditation?

In the context of the municipal drinking water Licensing Program, accreditation is the verification by a third party accreditation body that an operating authority has a QMS in place for a specific drinking water system that meets the requirements of the DWQMS³.

Licence Prerequisite

Before a licence is issued, amended or renewed, the Director will need to determine that each operating authority for the drinking water system has been accredited.

Categories of Accreditation

Three categories of accreditation have been created to facilitate a staged accreditation process at the option of the applicant, and two additional categories created to address situations where transitional and emergency accreditation are required.

Two of the staged accreditation categories- 1) Limited Scope – Partial DWQMS; and 2) Limited Scope – Entire DWQMS - are only available during the commencement of the Accreditation Program and the transition from drinking water approvals to drinking water licences.

The accreditation categories are summarized below:

Staged Implementation Options

1. Limited Scope – Partial DWQMS

Limited scope accreditation based on the documentation and implementation of twelve key elements of the DWQMS.

2. Limited Scope – Entire DWQMS

Limited scope accreditation based on the documentation of twenty elements of the DWQMS.

3. Full Scope – Entire DWQMS

Full scope accreditation based on the documentation and implementation of all twenty-one elements of the DWQMS.

³ In an ISO context, this process is referred to as 'certification'.

Ongoing Program Delivery Options

4. Limited Scope – Transitional

Limited scope accreditation based on the documentation of nine key elements of the DWQMS)

5. Limited Scope – Emergency

Limited scope accreditation based on written confirmation that the new operating authority for a subject system has reviewed the existing operational plans for the system)

Accreditation Processes

The above options and the accreditation processes for the establishment and administration of an Accreditation Program by an accreditation body have been further outlined in a document entitled **Accreditation Protocol - Operating Authorities – Municipal Drinking-Water Systems – July 2007**.

The following are selected highlights of the accreditation protocol.

Accreditation Program Handbook

The accreditation body will prepare an Accreditation Program handbook that will detail the Accreditation Program including rules of accreditation and appeal procedures. The handbook will include the forms necessary for an applicant to apply for accreditation. A copy of the handbook will be provided to a potential applicant upon request.

Assignment of an Auditor

Each application for accreditation will be assigned to an auditor who will review the application in accordance with the applicable accreditation processes set out in the accreditation protocol.

When assigning auditors, the accreditation body will assign auditors who are not in a conflict of interest, who have experience with applications of similar complexity, and with a view towards minimizing travel costs.

Public Notification

The accreditation body will maintain a list, sorted by owner that contains the following information in respect of every municipal residential drinking water system:

- (a) the name of the municipal residential drinking water system and its owner;
- (b) the name of every subject system comprising the drinking water system;
- (c) the name of the accredited operating authority for each subject system;
- (d) the scope of every operating authority's accreditation;
- (e) the applicable accreditation certificate number and date for each accreditation;
- (f) any decisions related to the revocation or suspension of an accreditation;
- (g) any audit results made available to the public; and
- (h) any other information required to be provided to the public in accordance with the accreditation protocol.

This information will be made available on a publicly accessible website on the Internet and shall be kept current.

Annual Audits

The accreditation body will annually audit the QMS of an operating authority with a Certificate of Accreditation (Full Scope – Entire DWQMS), in accordance with the following schedule:

- (a) in the first year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a surveillance audit;
- (b) in the second year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a surveillance audit; and
- (c) in the third year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a re-accreditation audit.

Surveillance audits will consist of an enhanced desktop systems audit with no on-site verification component. However, an auditor may attend at a subject system to verify information for the purposes of the audit.

Appeals and Appeal Process

The accreditation body will establish a two-level appeal process and related procedures and rules consistent with the requirements of the accreditation protocol that allows an appeal by an operating authority of a decision by the accreditation body to:

- (a) suspend an accreditation;
- (b) revoke an accreditation;
- (c) not grant an accreditation; or

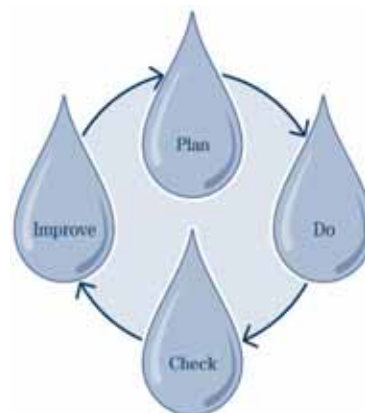
- (d) suspend an accreditation process.

The appeal process will be operated in accordance with the following:

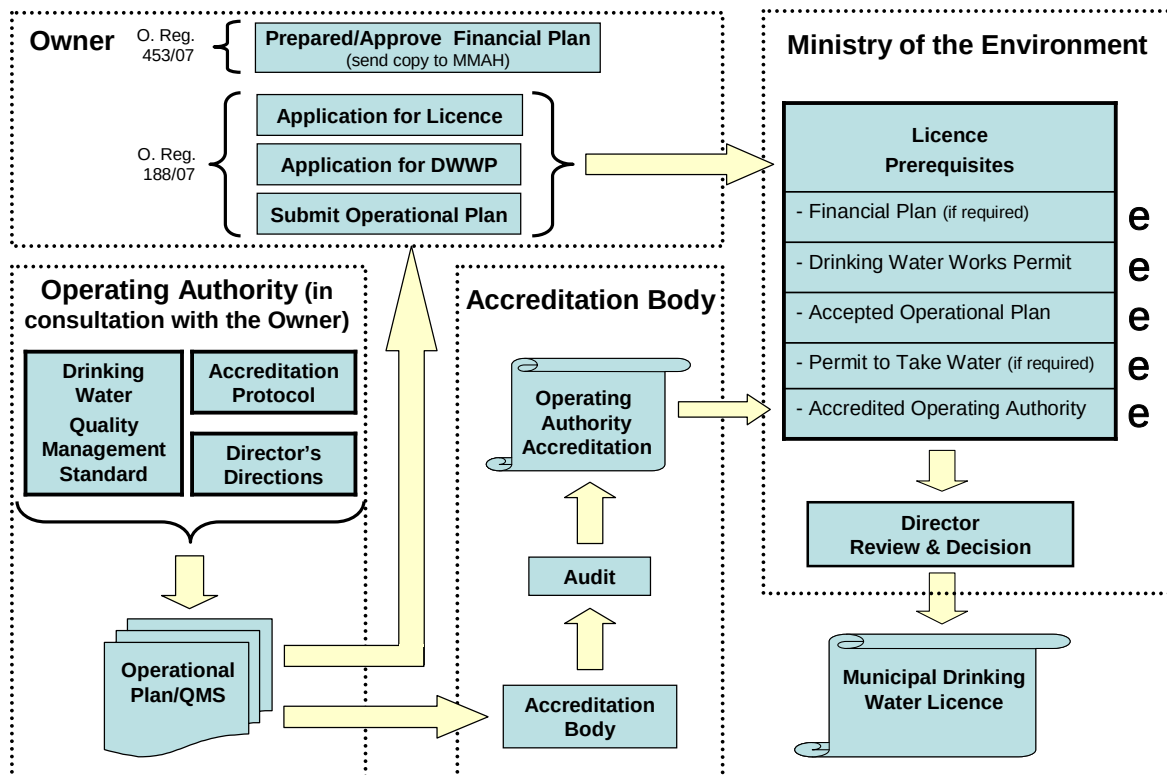
- (a) all appeals will be conducted in writing;
- (b) the adjudicator for the first and second level appeals will be the accreditation body and a management committee (comprising representatives from the ministry, the accreditation body and the drinking water sector), respectively;
- (c) to initiate a first level appeal, a notice of appeal summarizing the reasons for the appeal and evidence supporting the reasons must have been delivered to the accreditation body within 15 days of the decision being appealed from;
- (d) all decisions on a first level appeal will be made in writing and within 30 days of the receipt of a notice of appeal;
- (e) to initiate a second level appeal, a notice of appeal summarizing the reasons for the appeal and evidence supporting the reasons must have been delivered to the management committee within 15 days of the decision being appealed from; and
- (f) all decisions on a second level appeal will be made in writing and within 15 days of the receipt of a notice of appeal.

All written decisions made in accordance with the appeals protocol will be provided to the following persons or entities:

- (a) the operating authority;
- (b) the owner of the subject system;
- (c) the accreditation body or management committee, as appropriate; and
- (d) the Director.



Municipal Drinking Water Licensing Program



Licensing Program References

Drinking Water Portal

www.ontario.ca/drinkingwater

Environmental Registry

www.ebr.gov.on.ca

Environmental Review Tribunal

www.ert.gov.on.ca

Legislation:

- *Safe Drinking Water Act, 2002*

Regulations:

- O. Reg. 188/07 – Licensing of Municipal Drinking - Water Systems
- O. Reg. 453/07 – Financial Plans

Directions:

- Director's Directions, Minimum Requirements for Operational Plans – Municipal Drinking-Water Systems – July 2007

Orders:

- Minister's Order for Drinking-Water Approval and Fees

Quality Management Standard

- Drinking Water Quality Management Standard – October 2006

Publications:

- Licensing Overview Guide – October 2007
- Implementing Quality Management: A Guide For Ontario's Drinking Water Systems – July 2007
- Ontario's Drinking Water Quality Management Standard – Pocket Guide – July 2007.
- Guide for Applying for a Drinking Water Works Permit (***under development***)
- Guide for Applying for a Municipal Drinking Water Licence (***under development***)
- Guide for Submitting Operational Plans for Director's Acceptance (***under development***)
- Accreditation Protocol, Operating Authorities – Municipal Drinking-Water Systems – July 2007
- Toward Financially Sustainable Drinking-Water Systems and Wastewater Systems – August 2007
- Permit To Take Water Manual – April 2005
- Guide on Applying for Approvals Related to Municipal and Non-Municipal Drinking-Water Systems – Revised November 2003 (*for Cs of A*)

Further Information:

- Ministry of the Environment - Public Information Centre at 1-800-565-4923
- Licensing Program Information Centre at 1-877-955-5455 (Local Toronto Area 416-314-1651)